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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 13042-2008

Packaging containers - Tinsplate aerosol can

包装容器 铁质气雾罐

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Foreword

6.4 in this Standard is mandatory; the rest are recommended. This Standard replaces GB 13042-1998 "Packaging Containers - Aerosol Can". Compared with GB 13042-1998 "Packaging Containers - Aerosol Can", the main differences of this Standard are as follows:

- Specify that the volume of aerosol can shall not be greater than 1000 mL; - Delete the classification method by materials (Z and Y); and change the classification methods to be by structure, shape and pressure resistance properties; - Printing quality shall conform to QB/T 1877; - Delete the requirements on the average contact height of can mouth; - Delete the requirements on heat resistance test; - The requirements on the deformation pressure and bursting pressure are divided into two grades. one for normal can and the other for high pressure can; - Add compatibility requirements; - Add sanitary requirements. This Standard adopts the relevant provisions of ISO 90-3.2000(E) "Light gauge metal containers - Definitions and determination of dimensions and capacities - Part

3.Aerosol cans". This Standard was proposed by China Packaging Federation. This Standard shall be under the jurisdiction of China National Technical Committee for Packaging Standardization. Drafting organizations of this Standard. Zhongshan Kaida Fine Chemical Engineering Co., Ltd., National Packaging Product Quality Supervision And Inspection Center (Guangzhou), Hangzhou COFCO-MC Packaging Co., Ltd., Guangdong Laya Chemical Co., Ltd., Hebei Jiamei Iron-Printing and Can-making Co., Ltd. AND China Packaging Federation. Main drafters of this Standard. Luming, Cui Ruping, Feng Hui, Zhu Liping, Zhan Yan, Fan Zhilong and Ruan Shen. The previous versions replaced by this Standard are as follows: - GB 13042-1991, GB 13042-1998. GB/T 13042-2008 Packaging Containers - Tinplate Aerosol Can

1 Scope

China's mandatory national standard for tinplate aerosol cans. An aerosol can is a pressure vessel that costs a few cents, is made by the billion, and is handed to the public to be kept in a bathroom or a car - which is why its specification is written the way it is. The governing failure is bursting, and the standard addresses it with a proof pressure the can must withstand without permanent deformation and a burst pressure it must reach before failing, both set well above the internal pressure the propellant reaches at the highest temperature the can will meet, which is a car parked in the sun. The seam and the valve cup are where cans fail, so the double seam integrity is specified in detail. The requirements also cover the internal coating, since an unprotected tinplate wall corrodes from the inside with an aqueous product and the first sign is a can that has emptied itself.

This Standard specifies the terms, definitions, classification, materials, requirements, test methods, inspection rules, marking, packaging, transportation and storage of tinplate aerosol can (hereinafter referred as "aerosol can"). This Standard is applicable to the aerosol can made of thin tinplate steel sheet with the mouth diameter of

25.4 mm and the volume no less than 1000 ml.

2 Normative references

The articles contained in the following documents have become part of this document when they are quoted herein. For the dated documents so quoted, all subsequent modifications (including all corrections) or revisions made thereafter do not apply to this Standard. However, the parties who reach an agreement according to this Standard are encouraged to study whether the latest versions of these documents may be used. For the undated documents so quoted, the latest versions (including all modification sheets) apply to this document.

GB/T 1720 Method of test for adhesion of paint films

GB/T 2520 Cold-reduced electrolytic tinplate (GB/T 2520-2000, eqv ISO 11949.1995)

GB/T 2828.1 Sampling procedures for inspection by attributes - Part

1.Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (GB/T 2828.1-2003, ISO 2859-1.1999, IDT)

GB/T 6739 Paints and varnishes - Determination of film hardness by pencil test (GB/T 6739-2006, ISO 15184.1998, IDT)

3 Terms and definitions

The following terms and definitions apply to this Standard.

3.1 aerosol can Disposable metal container that is used to contain aerosol products.

Aerosol products will be released in the controlled form through valve under pre-pressing function during use.

3.2 tinplate aerosol can Aerosol can that is made of thin tinplate (chrome plate) steel sheet.

3.3 GB/T 13042-2008 three-piece can Aerosol can that is composed of can body, top cover and bottom cover.

3.4 two-piece can Aerosol can that is composed of can body and top cover (or bottom cover).

3.5 straight-body can Aerosol can that is composed of can body whose top part and bottom part have invariable diameter.

4.1 Classification

4.1.1 According to structure, aerosol can is classified into three-piece can and two-piece can as shown in Figure1.

4.1.2 According to shape, aerosol can is classified into straight body can and necked-in can as shown in Figure 2 and 3.

4.1.3 According to pressure resistance properties, aerosol can is classified into normal can and high pressure can.

4.2 Specification The specification of diameter of aerosol can is shown in Table 1.

5 Materials

5.1 The properties of thin tinplate steel sheet shall conform to the relevant provisions in GB/T 2520.

5.2 The adhesive force and impact resistance of thin tinplate (or chrome plate) steel sheet shall conform to the relevant provisions in QB/T 2763.

6.1 Appearance quality

6.1.1 The printing quality shall conform to the relevant provisions of QB/T 1877.

6.1.2 The neck-in part of two-piece can shall be free of cracks, obvious wrinkles, pits or
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6.1.3 The can body shall be flat without rust. The inner coating of can shall be coated uniformly without bulge or impurities.

6.2 Dimension and deviation The dimension and deviation of aerosol can shall conform to the provisions in Table 2.

6.3 Supplemental coating and coating-layer quality

6.3.1 Integrity of supplemental coating of welding-seam. aerosol can with supplemental coating on welding-seam shall be free of linear corrosion or dense corrosion pits after test.

6.5 Compatibility User shall, according to the contents of the product, conduct test to verify the compatibility of contained product and aerosol can.

7 Test methods

7.1 Appearance Visual inspection shall be conducted at the place where is 0.6m from the object under natural light or 40W lamp-light.

7.2 Measurement of dimension

7.2.1 The inner diameter and outer diameter of can mouth AND the height of can shall be measured by the particular go / no-go gauge or Vernier caliper.

7.3 Integrity test of supplemental coating of welding-seam Submerge the supplemental coating of welding-seam in the 20% copper sulfate solution ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$).

7.4 Adhesive force test of outer-inner coating-layers It shall be conducted in accordance with relevant provisions in GB/T 1720.

7.5 Hardness test of outer coating It shall be conducted in accordance with the relevant provisions in GB/T 6739.

8 Inspection rules

8.1 The products delivered at one-time are deemed as a batch; one aerosol can is a unit product.

8.2 The product inspection includes exit-factory inspection and type inspection. Exit-factory inspection must be conducted before the products are delivered out of factory.